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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/987,376	11/14/2001	William D. Wilber	A8241	6692

7590 10/03/2003
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EXAMINER

JONES, STEPHEN E

ART UNIT PAPER NUMBER

2817

DATE MAILED: 10/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/987,376	WILBER ET AL.	
	Examiner	Art Unit	
	Stephen E. Jones	2817	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-62 is/are pending in the application.
- 4a) Of the above claim(s) 1-34 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 35-62 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-62 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
 If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>2</u> | 6) <input type="checkbox"/> Other: |

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of Group I, in Paper No. 5 is acknowledged.

Claims 1-34 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 5.

Claim Objections

1. Claims 38, 39, 45, 46, 48, 49, 50, 52, 53, 61, and 62 are objected to because of the following informalities:

The preamble of these claims is not consistent with the preceding claims (i.e. the phrase "The method" should read as --The filter assembly--).

Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 40 and 54 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The phrase "said premask filter" lacks antecedent basis and thus renders the claim vague and indefinite since it is not clear what the phrase is referring.

Due to the indefinite nature of these claims no art rejection has been applied.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 35-39, 41-46, 48-53, and 55-62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ko et al. (JP02001060804A) (abstract cited by applicant and full document cited by examiner) in view of Arakawa et al.

Ko et al. teaches a filter including: a block of dielectric material partially filling a conductive housing (see Figs. 4 and 8); three corners of the block are scraped away; probes are provided as terminals to inherently input and output signal energy; and the three corner cuts are all in a 90 degree X, Y, Z relationship.

However, Ko does not explicitly teach a tuning element (Claim 35) formed as a slot (Claim 36), circular areas (Claim 37), or a cylinder shape (Claim 38); that the slots

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are formed on particular faces (Claims 41-42); plural slots or circles on the faces (Claims 43 and 48-50), a plated hole in the block filter and a connection to an external circuit (Claims 46, 53, 59, and 62); or that the tuning element is metallic (Claim 55) or dielectric (Claim 56).

Note that the product by process limitation "grinded" is not given any patentable weight in Claim 39.

Arakawa teaches that particular portions of the shield coating can be removed from a dielectric resonator to adjust the frequency (e.g. see Col. 4, lines 5-10 and Figs. 32A and 32B). Arakawa et al. also teaches a dielectric waveguide resonator filter (Fig. 18) which includes plated holes (5) for input and output which include a connection part (3) for an external circuit (e.g. see Col. 12, lines 30-37, and the last few lines of the abstract).

It would have been considered obvious to one of ordinary skill in the art to have to have removed portions of the outer conductor shielding such as taught by Arakawa in the Ko et al. device, because it would have provided the advantageous benefit of providing tunability of the resonator, and to have removed multiple portions of the faces of the resonators, and to have chosen particular shapes of the removed portions and particular faces, would have been a mere optimization of the tuning based on desired characteristics. Also note that a removed circular pattern of the shielding conductor would have formed a cylindrical shape on the face of the resonator block filter (i.e. the depth of the removed portion forms a cylinder).

It would have been obvious to one of ordinary skill in the art to have substituted plated input/output holes having connection parts such as taught by Arakawa in place of the probes in the Ko filter, because it would have provided the advantageous benefit of a coupling mechanism that reduces electromagnetic leakage (e.g. see the last few lines of the Arakawa abstract), thereby suggesting the obviousness of such a modification.

Furthermore, it would have been considered obvious to one of ordinary skill in the art to have included metallic or dielectric tuning rods or screws in the Ko et al. device, because metallic and dielectric tuning screws/rods are well-known tuning means for filters to provide adjustability of the frequency characteristics of a filter/resonator.

Double Patenting

7. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

8. Claims 35-39, 41-53, and 55-62 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-2, 4, 6-8, 24, 28, 30, and 34 of copending Application No. 09/987,353 in view of Arakawa.

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The co-pending application claims teach all of the limitations of the present claims except a tuning element formed as a slot, circular areas, or a cylinder shape; that the slots are formed on particular faces; plural slots or circles on the faces, or that the tuning element is metallic or dielectric.


It would have been considered obvious to have included the particular tuning features to the co-pending application claims for the same reasons as recited in the rejections above.

This is a provisional obviousness-type double patenting rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen E. Jones whose telephone number is 703-305-0390. The examiner can normally be reached on Monday through Friday from 8 AM to 4 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert J. Pascal can be reached on 703-308-4909. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.


Stephen Jones
Patent Examiner
Art Unit 2817

SEJ